Modul 3 TOPIK 2 : Metode Perancangan Arsitektur

Sub-Topik 2 : ANALISIS

ANALYSIS (ANALISIS)

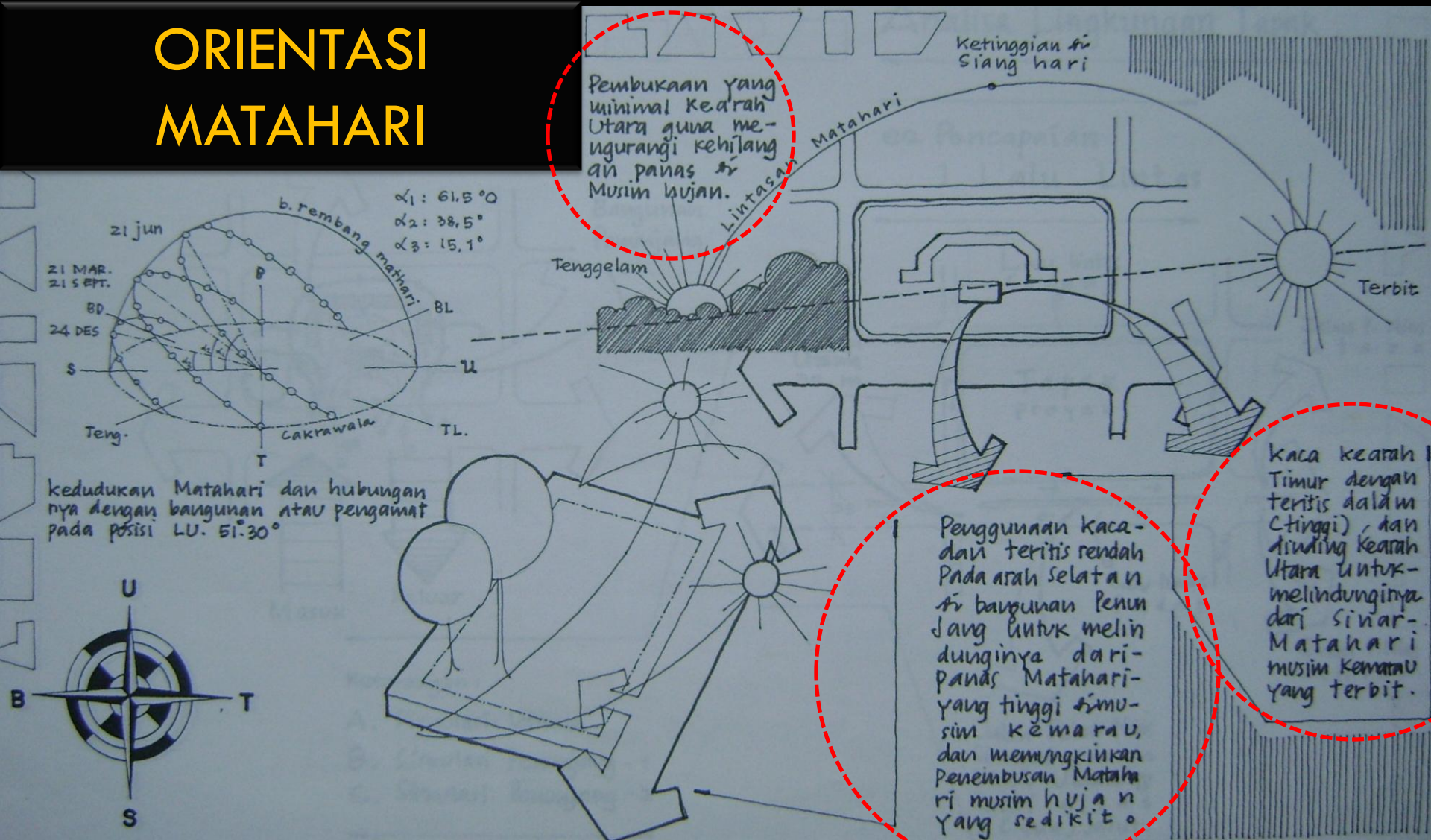
KAJIAN yang dilakukan terhadap suatu PERMASALAHAN guna MENELITI struktur permasalahan tersebut secara MENDALAM untuk menghasilkan suatu ARAHAN bagi PENYELESAIAN PERMASALAHAN

Terminologi ANALISIS menurut KBBI (Edisi III, 2011)

(a) PENYELIDIKAN terhadap suatu peristiwa, kondisi, keadaan (tematik) untuk mengetahui keadaan yang sebenarnya (sebab-musabab, duduk perkaranya, dsb);

MENYELIDIKI KONDISI ORIENTASI MATAHARI PADA TAPAK PERENCANAAN UNTUK MENGETAHUI BAGAIMANA MATAHARI BEKERJA MELALUI ARAH LINTASANNYA

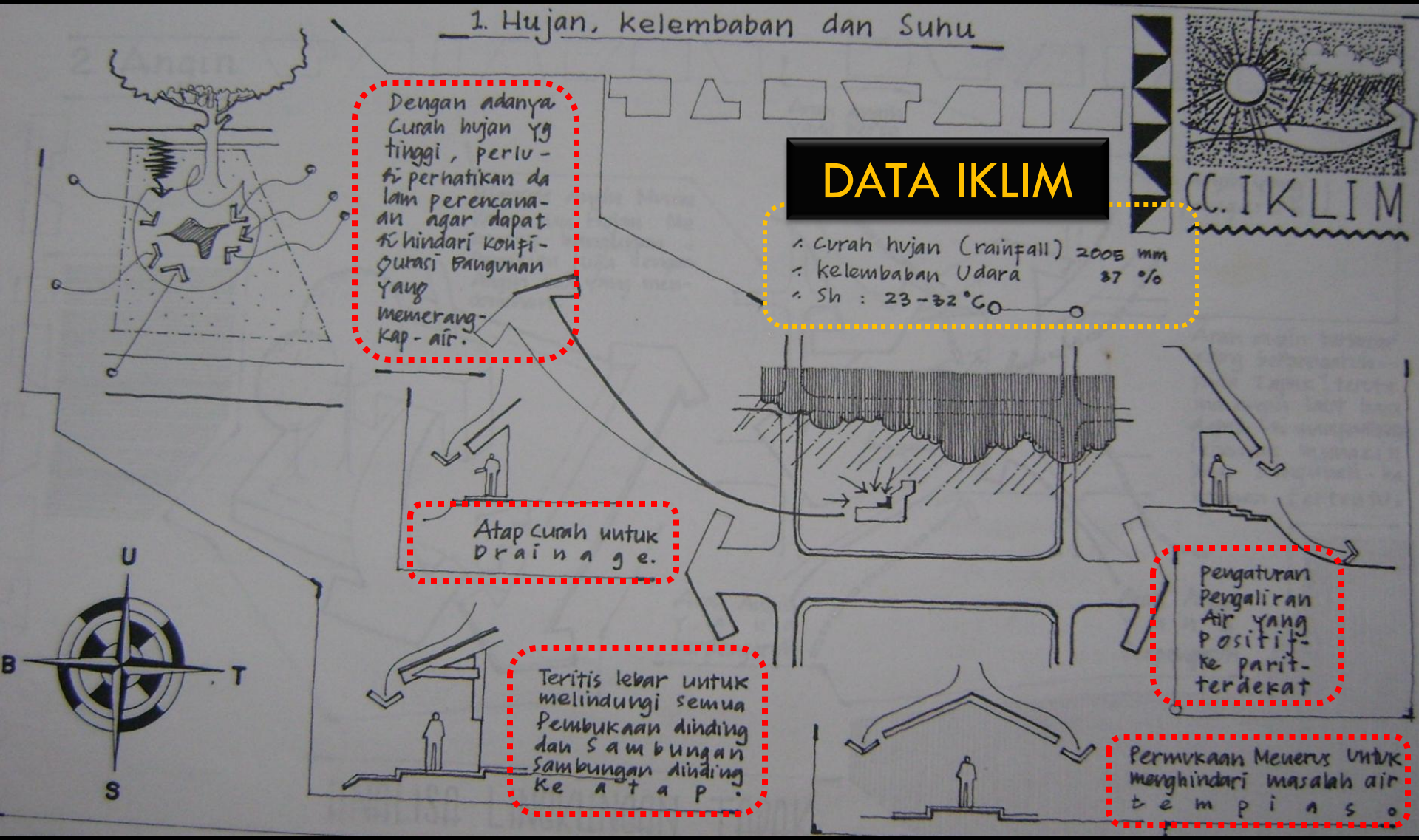
ORIENTASI MATAHARI



Terminologi ANALISIS menurut KBBI (Edisi III, 2011)

(b) PENGURAIAN suatu pokok atas berbagai bagiannya dan PENELAAHAN bagian itu sendiri serta HUBUNGAN ANTAR BAGIAN untuk memperoleh pengertian yang tepat dan pemahaman arti keseluruhan;

PENGURAIAN (PENJELASAN SECARA DETAIL) TENTANG IKLIM DENGAN MENELAAH SETIAP BAGIAN-BAGIANNYA (HUJAN, KELEMBABAN, SUHU)



Terminologi ANALISIS menurut KBBI (Edisi III, 2011)

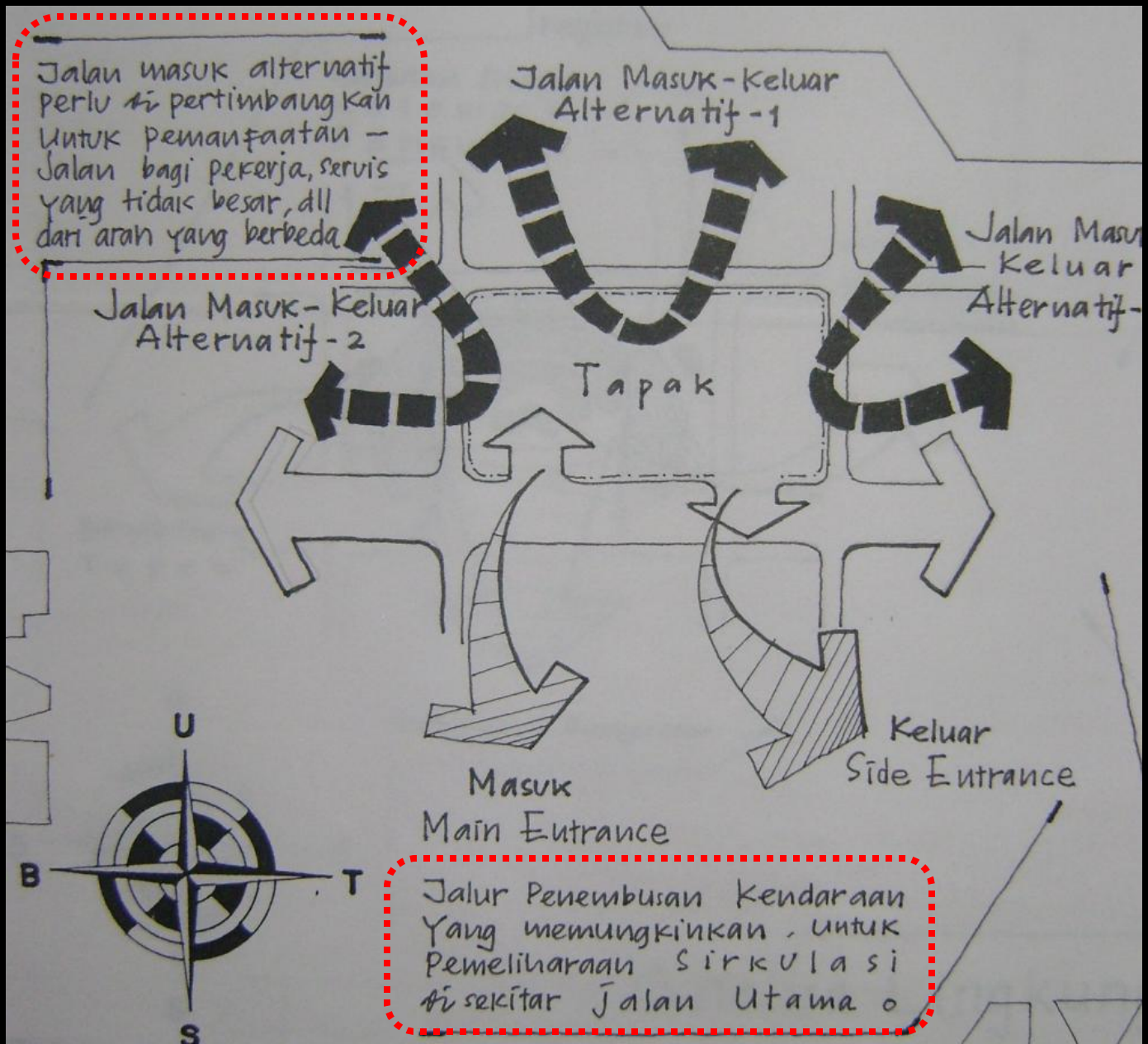
(c) Penjabaran tentang sesuatu sesudah dikaji sebaik-baiknya

PENJABARAN TENTANG PENCAPAIAN SETELAH MENGKAJI LEBIH DULU ASPEK LALU LINTAS YANG ADA

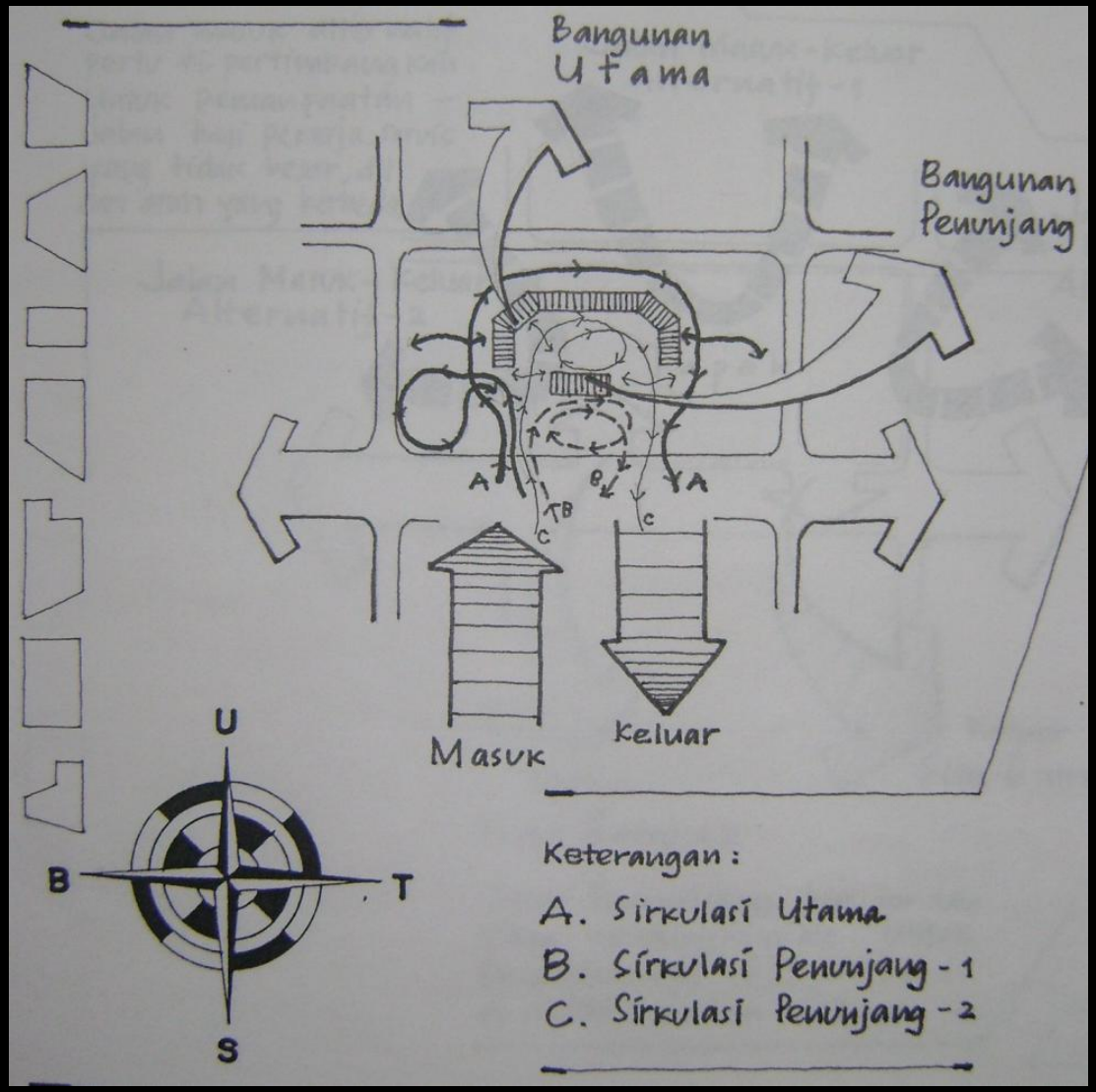
Terminologi ANALISIS menurut KBBI (Edisi III, 2011)

(d) Pemecahan persoalan yg dimulai dengan dugaan akan kebenarannya

ENTRANCE (PENCAPAIAN)



PEMECAHAN MASALAH POLA SIRKULASI YANG PALING MEMUNGKINKAN SETELAH MENGANALISIS POLA LALU LINTAS DAN *ENTRANCE* (PENCAPAIAN)



JENIS-JENIS ANALISIS

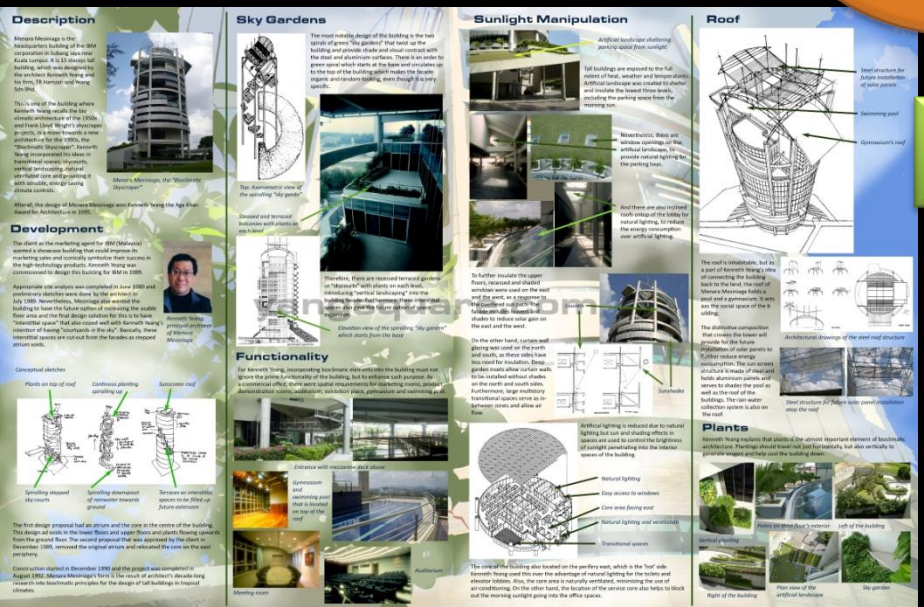
ANALISIS

1. ANALISIS PERENCANAAN

Untuk Perancangan Baru

Misalnya :

Analisis contoh-contoh yang sudah dipresentasikan



2. ANALISIS PERANCANGAN

Untuk *Presedent* (Perancangan yang Sudah ada dan eksis)

Misalnya :

Analisis Studi Kasus (Terkait Tema Tertentu)

Contoh Analisis Perencanaan untuk Perancangan Baru

Contoh Analisis PERANCANGAN pada *Presedent*

Description

Menara Mesiniaga is the headquarters building of the IBM corporation in Subang Jaya near Kuala Lumpur. It is 15 storeys tall building, which was designed by the architect Kenneth Yeang and his firm, TR Hamzah and Yeang Sdn Bhd.

This is one of the building where Kenneth Yeang recalls the bio climatic architecture of the 1950s and Frank Lloyd Wright's skyscraper projects, in a move towards a new architecture for the 1990s, the "Bioclimatic Skyscraper". Kenneth Yeang incorporated his ideas in transitional spaces, skycourts, vertical landscaping, natural ventilated core and providing it with sensible, energy-saving climate controls.

Menara Mesiniaga, the "Bioclimatic Skyscraper"

Afterall, the design of Menara Mesiniaga won Kenneth Yeang the Aga Khan Award for Architecture in 1995.

Development

The client as the marketing agent for IBM (Malaysia) wanted a showcase building that could improve its marketing sales and iconically symbolize their success in the high-technology products. Kenneth Yeang was commissioned to design this building for IBM in 1989.

Appropriate site analysis was completed in June 1989 and preliminary sketches were done by the architect in July 1989. Nevertheless, Mesiniaga also wanted the building to have the future option of increasing the usable floor area and the final design solution for this is to have "interstitial space" that also coped well with Kenneth Yeang's intention of having "courtyards in the sky". Basically, these interstitial spaces are cut-out from the facades as stepped atrium voids.

Kenneth Yeang, principal architect of Menara Mesiniaga

Conceptual sketches

The first design proposal had an atrium and the core in the centre of the building. This design ad voids in the lower floors and upper floors and plants flowing upwards from the ground floor. The second proposal that was approved by the client in December 1989, removed the original atrium and relocated the core on the east periphery.

Construction started in December 1990 and the project was completed in August 1992. Menara Mesiniaga's form is the result of architect's decade-long research into bioclimatic principles for the design of tall buildings in tropical climates.

Sky Gardens

Top: Axonometric view of the spiralling "sky garde"

The most notable design of the building is the two spirals of green "sky gardens" that twist up the building and provide shade and visual contrast with the steel and aluminium surfaces. There is an order to green spiral which starts at the base and circulates up to the top of the building which makes the facade organic and random-looking, even though it is very specific.

Shaded and terraced balconies with plants on each level

Therefore, there are recessed terraced gardens or "skycourts" with plants on each level, introducing "vertical landscaping" into the building facade. Furthermore, these interstitial spaces also give the future option of space expansion.

Elevation view of the spiralling "sky garden" which starts from the base

Functionality

For Kenneth Yeang, incorporating bioclimatic elements into the building must not ignore the prime functionality of the building, but to enhance such purpose. As a commercial office, there were spatial requirements for marketing rooms, product demonstration rooms, auditorium, exhibition place, gymnasium and swimming pool.

Entrance with mezzanine deck above

Gymnasium and swimming pool that is located on top of the roof

Meeting room

Auditorium

Sunlight Manipulation

Artificial landscape sheltering parking space from sunlight

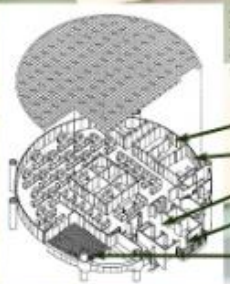
Tall buildings are exposed to the full extent of heat, weather and temperatures. Artificial landscape was created to shelter and insulate the lowest three levels, including the parking space from the morning sun.

Nevertheless, there are window openings on the artificial landscape, to provide natural lighting for the parking bays.

And there are also inclined roofs ontop of the lobby for natural lighting, to reduce the energy consumption over artificial lighting.

To further insulate the upper floors, recessed and shaded windows were used on the east and the west, as a response to the overhead sun path. The facade includes louvers and shades to reduce solar gain on the east and the west.

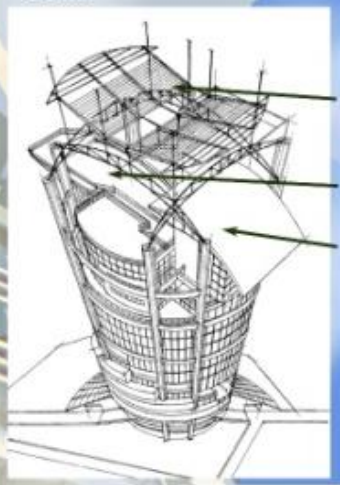
On the other hand, curtain wall glazing was used on the north and south, as these sides have less need for insulation. Deep garden insets allow curtain walls to be installed without shades on the north and south sides. Furthermore, large multistory transitional spaces serve as in-between zones and allow air flow.



Artificial lighting is reduced due to natural lighting but sun and shading effects in spaces are used to control the brightness of sunlight penetrating into the interior spaces of the building.

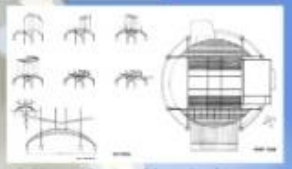
The core of the building also located on the perifery east, which is the 'hot' side. Kenneth Yeang used this over the advantage of natural lighting for the toilets and elevator lobbies. Also, the core area is naturally ventilated, minimizing the use of air-conditioning. On the other hand, the location of the service core also helps to block out the morning sunlight going into the office spaces.

Roof



The roof is inhabitable, but as a part of Kenneth Yeang's idea of connecting the building back to the land, the roof of Menara Mesiniaga holds a pool and a gymnasium. It acts as the social space of the building.

The distinctive composition that crowns the tower will provide for the future installation of solar panels to further reduce energy consumption. The sun screen structure is made of steel and holds aluminium panels and serves to shades the pool as well as the roof of the buildings. The rain water collection system is also on the roof.



Architectural drawings of the steel roof structure

Steel structure for future solar panel installation atop the roof

Plants

Kenneth Yeang explains that plants is the utmost important element of bioclimatic architecture. Plantings should travel not just horizontally, but also vertically to generate oxygen and help cool the building down.

Palms on third floor's exterior

Left of the building

Vertical planting

Right of the Building

Plan view of the artificial landscape

Sky garden